

# Synthesis of Selenium-Containing Polystyrene Microspheres and Useing as Catalyst for Oxidation of Acrolein

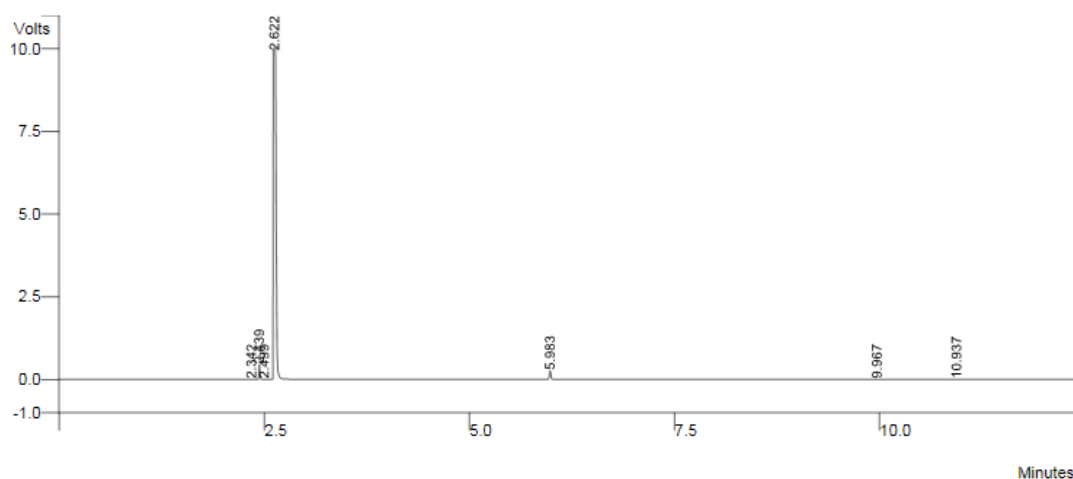
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**Table S1.** A series of selenium-containing DSe-PS.

| Sample      | St (g) | FVPDSe (g) | DVB (g) | KPS (g) | SLS (g) | H <sub>2</sub> O (mL) |
|-------------|--------|------------|---------|---------|---------|-----------------------|
| Se-1-D-2-20 | 1.0    | 0.066      | 0.132   | 0.02    | 0.005   | 20                    |
| Se-1-D-2-40 | 1.0    | 0.066      | 0.132   | 0.04    | 0.01    | 40                    |
| Se-1-D-2-60 | 1.0    | 0.066      | 0.132   | 0.04    | 0.01    | 60                    |
| Se-1-D-1-40 | 1.0    | 0.100      | 0.100   | 0.04    | 0.01    | 40                    |
| Se-1-D-3-40 | 1.0    | 0.05       | 0.15    | 0.04    | 0.01    | 40                    |
| Se-1-D-4-40 | 1.0    | 0.04       | 0.16    | 0.04    | 0.01    | 40                    |
| Se-1-D-5-40 | 1.0    | 0.1        | 0.5     | 0.04    | 0.01    | 40                    |
| Se-2-D-1-40 | 1.0    | 0.2        | 0.1     | 0.04    | 0.01    | 40                    |



**Figure S1.** The GC traces of acrolein.

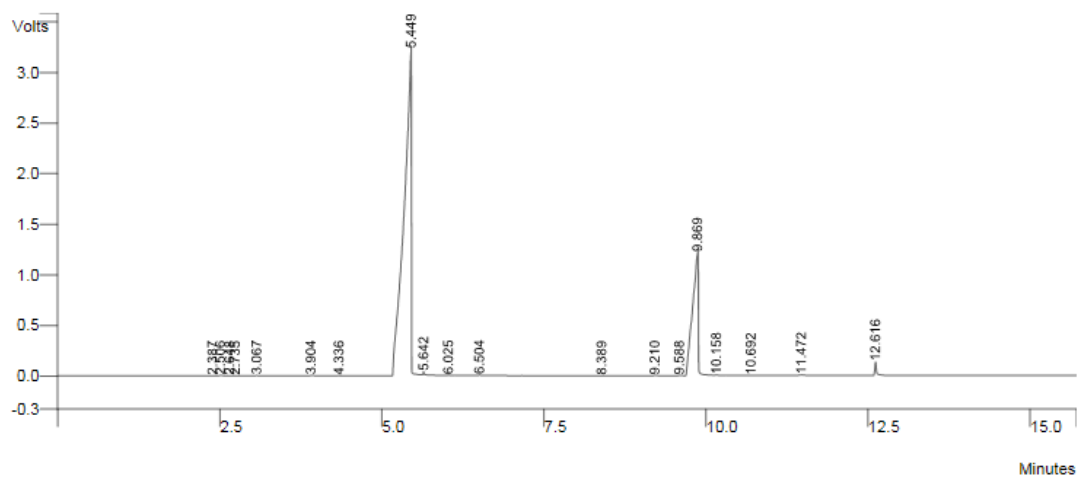


Figure S2. The GC traces of acrylic acid.

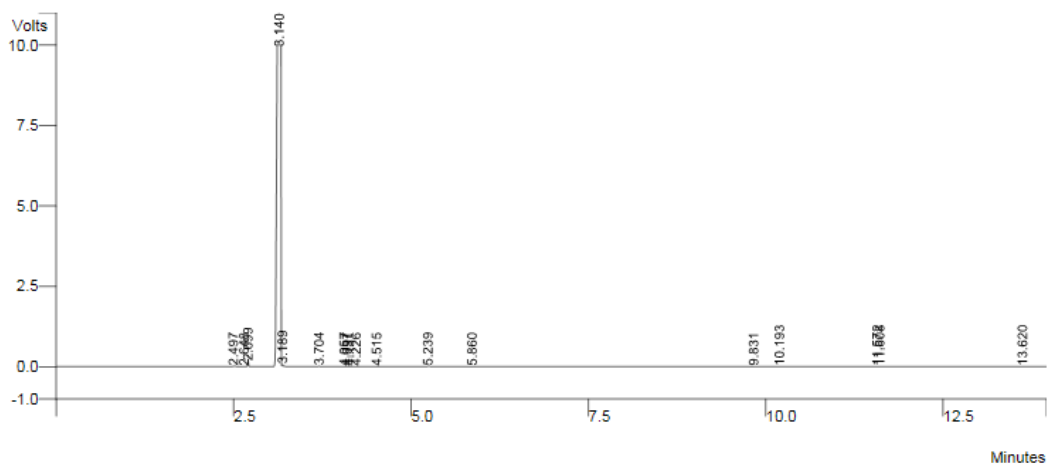


Figure S3. The GC traces of Methyl acrylate.

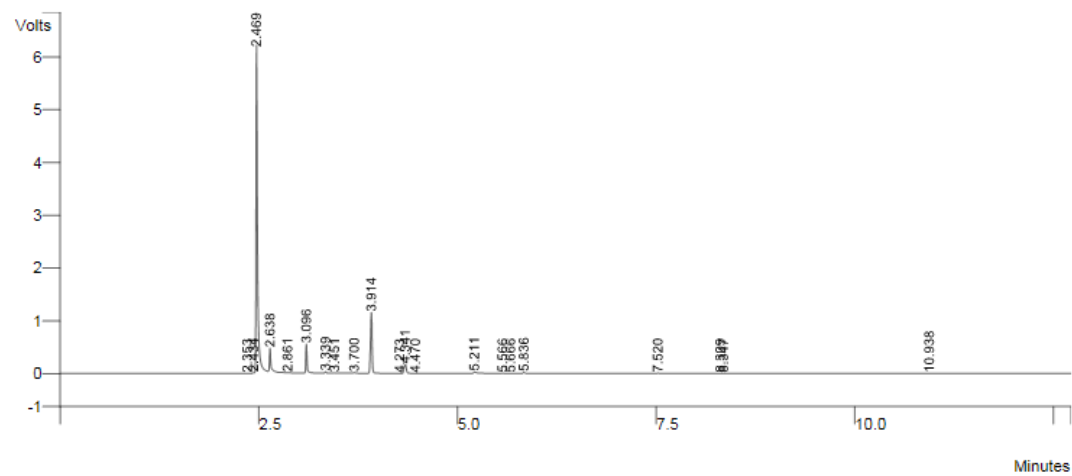


Figure S4. The GC traces of oxidation of acrolein catalyzed by Se-1-D-5-40.